

ALISMA GRAMINEUM IN VERMONT

WM. D. COUNTRYMAN

Although common in the western United States north of the 40th parallel and in the adjacent Prairie Provinces of Canada, *Alisma gramineum* K. C. Gmel. has been known in eastern North America only from the St. Lawrence River valley and the eastern end of Lake Ontario.

Asa Gray was apparently the first person to collect *Alisma gramineum* east of the Mississippi River. His specimen, collected at Ogdensburg, St. Lawrence County, New York, is deposited in the Gray Herbarium; unfortunately the label bears no date and, therefore, it can be stated with certainty only that it was collected before January 1888, the date of Gray's death.

In Canada, Brother Marie-Victorin collected the species near Longueuil and at Montreal, Quebec in 1918. Fernald and Wiegand (1923) reported the plant from a cove of Lake Ontario near Chaumont, Jefferson County, New York. Muenscher and Maguire (1931) and Muenscher (1932) found it growing at a number of stations along the St. Lawrence River in St. Lawrence and Franklin Counties, New York. More recently Raymond and Kucyniak (1948) have reported *Alisma gramineum* as "a pesky weed around Montreal now progressively invading the Richelieu River Valley."

Such a rapidly spreading species could soon be expected to make its appearance in the Champlain Valley. It is not surprising, therefore, that I found it in Vermont growing along the shore of Lake Champlain at Shelburne Bay in 1961. Subsequent collections have shown it to be present along the shores of the Lake as far south as the Town of Addison, Addison County, Vermont. It is noticeably more common in the northern portion of the lake. In 1966, after diligent searching, I found only a few plants in Addison, Vermont and none at all south of that town. I have not collected on the New York side in the northern portion of Lake Champlain and do not know if *Alisma gramineum*

grows there; it would seem most probable that it does.

Recently I have been privileged to examine the specimens of *Alisma gramineum* in the herbarium of the Plant Research Institute, Department of Agriculture, Ottawa. These collections show that the species is well established on the Canadian side of the St. Lawrence River from Lake Ontario as far downstream as St. Angèle de Laval, Quebec, a distance of approximately 250 miles. Although the plant has now successfully invaded the Richelieu River and Lake Champlain it is interesting to note that it has not yet been found in any other tributaries of the St. Lawrence.

Both submersed plants with ribbon-like leaves and emersed plants with lanceolate to elliptic blades were found at most of the Vermont stations. When fruiting, *Alisma gramineum* is easily recognized by its tricarinate achenes in contrast to the bicarinate achenes of *A. triviale* Pursh and *A. subcordatum* Raf.

All of the specimens cited below were collected by me in western Vermont along the shores of Lake Champlain. I have deposited duplicates of all specimens cited in the herbarium of the New England Botanical Club.

ALISMA GRAMINEUM K. C. Gmelin. VERMONT. GRAND ISLE COUNTY: Alburg, occasional, submersed in bay north of Rouse's Point toll bridge, 11 August 1964 952; Isle La Motte, Jordan Bay, 10 August 1964 948; North Hero, rare, near North Hero Station, 27 August 1965 1359; Grand Isle, Simms Point, The Gut, terrestrial specimens blooming earlier than those growing submersed, 14 August 1964 958; CHITTENDEN COUNTY: Colchester, west of R.R. tracks, Colchester Point, 5 October 1964 1161; Shelburne, Shelburne Bay, 11 August 1961 98; Charlotte, sandy shore at Town Farm Bay, 30 July 1965 1323; ADDISON COUNTY: Ferrisburg, occasional at Basin Harbor, 18 August 1966 1547; Panton, Arnold Bay, 13 September 1964 1086; Addison, scarce, only about 12 plants seen in one-half mile of beach, Potash Bay, 21 August 1966 1555.

DEPARTMENT OF BIOLOGY
NORWICH UNIVERSITY
NORTHFIELD, VERMONT 05663

LITERATURE CITED

- FERNALD, M. L. and K. M. WIEGAND, 1923. Notes on Some Plants of the Ontario and St. Lawrence Basins, New York. *Rhodora* 25: 206.
- MUENSCHER, W. C. 1932. Aquatic Vegetation of the Oswegatchie and Black River Watersheds. In: A Biological Survey of the Oswegatchie and Black River Systems. New York State Conservation Department, Biological Survey No. VI, Section VIII: 215.
- MUENSCHER, W. C. and BASSETT MAGUIRE. 1931. Notes on Some New York Plants. *Rhodora* 33: 165.
- RAYMOND, MARCEL and JAMES KUCYNIAK. 1948. Six additions to the Adventitious Flora of Quebec. *Rhodora* 50: 179.